

DP-301219

DISTRIBUTED ARCHITECTURE COMMUNICATION
SYSTEM HAVING BUS VOLTAGE COMPENSATION

ABSTRACT OF THE DISCLOSURE

An improved distributed architecture system including multiple electronic
5 modules that communicate with each other over a communication bus through
concurrent modulation of bus current and bus voltage, wherein the bus voltage
detected by a receiver in the remote module is compensated to ensure reliable
reception of a voltage modulated bus communication despite the modulation of bus
current by the remote module. A remote module is coupled to the communication
10 bus via input resistors to provide resistive isolation from the bus in the event of a
short circuit failure in the remote module, and a charge pump and current mirror
circuit in the remote module produce a compensation voltage across a resistor
coupling the receiver to the bus, with the compensation voltage substantially
canceling the influence of bus current modulation on the received bus voltage.